# APPENDIX

1-4. cancelled

5. (currently amended) In an autostereoscopic display system whereby a lenticular screen is aligned in juxtaposition with a display screen, wherein the lenticular screen has lenticules on one side thereof facing ~~outwardly away from~~ the display screen, wherein the improvement comprises a closed chamber affixed over the lenticules and a fluid reservoir in communication with the closed chamber and storing an optically clear fluid that is ~~can be~~ introduced and removed from the closed chamber.

6. (original) The autostereoscopic display system of claim 5, further comprising a fluid pump and a control valve coupled to the fluid reservoir and adapted to introduce and remove the fluid from the closed chamber.

7. (original) The autostereoscopic display system of claim 5, wherein the fluid reservoir is a syringe having a handle for transferring fluid to and from the syringe.

8. (original) An autostereoscopic lenticular screen apparatus, comprising:

a display screen having a display surface,

a lenticular screen having lenticules disposed on one side thereof and a smooth surface on the other side thereof, said lenticular screen being held in juxtaposition to the display surface,

a closed chamber formed over the lenticules,

a fluid reservoir coupled to the closed chamber, and

a transfer valve coupled to the fluid reservoir for introducing and removing an optically clear fluid from the chamber.

9. (original) The autostereoscopic lenticular screen apparatus of claim 8, wherein the lenticular screen is oriented with the lenticules facing outwardly away from the display screen.

10. (original) The autostereoscopic lenticular screen apparatus of claim 8, wherein the lenticular screen is oriented with the lenticules facing inwardly toward the display screen.

11. (original) The autostereoscopic lenticular screen apparatus of claim 10, wherein the smooth surface of the lenticular screen is coated with an antireflective material.

12. (currently amended) The autostereoscopic lenticular screen apparatus of claim 8, wherein the fluid is a fluoropolymer ~~floropolymer~~.

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13. (original) The autostereoscopic lenticular screen apparatus of claim 8, wherein the fluid has an index of refraction that is similar to that of the lenticules.

14. (original) The autostereoscopic lenticular screen apparatus of claim 13, wherein the fluid has an index of refraction that is identical to that of the lenticules.

15. (original) The autostereoscopic lenticular screen apparatus of claim 8, wherein the lenticular screen is a substrate having lenticules disposed on one side thereof.

16. (original) The autostereoscopic lenticular screen apparatus of claim 15, wherein the substrate is glass.

17. (original) The autostereoscopic lenticular screen apparatus of claim 8, wherein the fluid reservoir is a syringe and the transfer valve is a pump handle on the syringe.

18. (original) A method for switching an autostereoscopic display system between a planar viewing mode and a stereoscopic viewing mode, wherein a lenticular screen having lenticules disposed on one side thereof is aligned in juxtaposition with a display screen, comprising:

forming a closed chamber over the lenticules,

introducing an optically clear fluid into a portion of the closed chamber to thereby deactivate the lenticular screen, and

removing the optically clear fluid from the closed chamber to thereby activate the lenticular screen.

19. (original) The method for switching an autostereoscopic system as in claim 18, wherein the lenticular screen is oriented with the lenticules facing outwardly away from the display screen.

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20. (original) The method for switching an autostereoscopic system as in claim 18, wherein the lenticular screen is oriented with the lenticules facing inwardly toward the display screen.

21. (original) The method for switching an autostereoscopic system as in claim 20, wherein the lenticular screen has a smooth surface opposite the one side which is coated with an antireflective material.

22. cancelled.

[0011] The present invention is an autostereoscopic lenticular screen. Such devices are generally known, wherein a lenticular screen is held in juxtaposition with a display surface. The lenticular screen is preferably formed of a glass substrate with lenticules disposed on one side thereof and a smooth surface on the other side thereof. In one aspect of the invention, a closed chamber is formed over the lenticules. In order to deactivate the refractive properties of the lenticular screen, and thereby view the display in a planar mode, an optically clear fluid, such as a fluoropolymer ~~floropolymer~~, is introduced into at least a portion of the closed chamber. In order to activate the refractive properties of the lenticular screen, and thereby view the display in a stereoscopic mode, the optically clear fluid is removed from the closed chamber. The means for introducing and removing the fluid is preferably a syringe having a pump handle.

[0025] Therefore, we advocate the use of the method described with the help of Fig. 4 that shows the lenticules 402, which are part of the glass substrate 401, facing inward toward the flat panel display 404. There may or may not be an air gap 406 between lenticules 402 and the surface of the display 404, or more properly, the front surface of its cover-glass 405, depending upon the desired value of the focal length of the lenticules or other design parameters. The outer face of the substrate 401 is flat and it has been coated with an AR coating 403. The viewer 407 ~~406~~ enjoys the autostereo image produced by the refractive properties of the screen. The structure of the screen itself has been rendered unobtrusive because the lenticular structure is facing away from the user and is in close juxtaposition with the surface of the display 404. Additionally and importantly, AR surface 403 is directly facing the user. By this means reflections are effectively suppressed and the viewer enjoys a superior stereoscopic image.

[0028] We need to insure that the fluid remains optically clear and of a low viscosity to facilitate rapid influx and removal. It is necessary to also insure that the fluid and lenticular surface and faceplate material are chosen or prepared so that there is a minimum "wetting" of the lenticular surface by the fluid. This can be as simple as choosing a proper liquid or material with which to fabricate the lenticular screen, or one can also use a clear coating on the lenticular surface to achieve the same results. The surface of the display screen is likewise treated with the same type of coating so it may also not be "wetted" by the fluid. This will insure a complete removal of the fluid upon release of the pressure that kept it in place interstitially. Such coatings are commercially available and some are of the fluoropolymer ~~floropolymer~~ type.

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